



***ACT-IR220Li/220LN***  
***IrDA Serial Port Adapter***  
***Product Specification Summary***



**FCC & VCCI Compliance Statement**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

WARNING-FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user authority to operate this equipment

NOTE: This equipment has been tested and found to comply with the limits for Class B digital device, pursuant to Part 15 of the FCC Rules. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Reorient or relocate the receiving antenna.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment is in the 2<sup>nd</sup> Class category (information equipment to be used in a residential area there to) and conforms to the standards set by the Voluntary Control Council For Interference by Data Processing Equipment and Electronic Office Machines aimed at preventing radio interference in such residential area.

When used near a radio or TV receiver, it may become the cause of radio interference. Read the instructions for correct handling.

NOTE: Must be used with shielded cable only.

**FOR YOUR RECORDS**

For your assistance in reporting this product in case of loss or theft, please record the model and serial number which are located on the bottom of the case. Please retain this information.

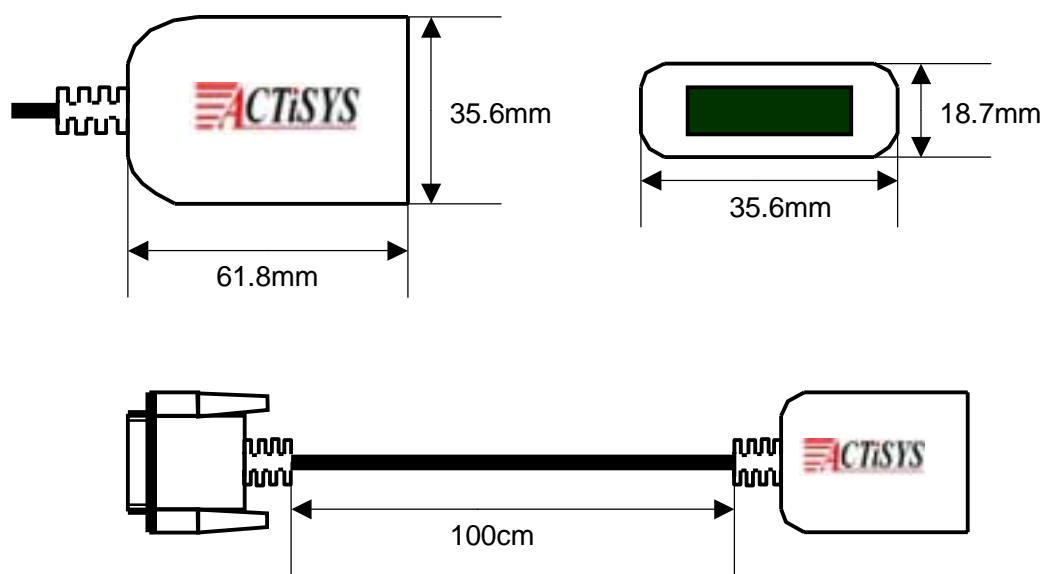
Model Number	Serial Number
Date of Purchase	Place of Purchase

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Respective corporations.

## Product Introduction

**IR220LN** No SW Modification required, single IR speed. You may use exactly the same RS232 protocol software you have now if you use one each of IR220LN on each side of the two communicating devices. You can select one of the following IR speeds; 9.6K, 19.2K, 38.4K, 57.6K, 115.2K bps as fixed IR speed for your application.

**IR220Li** Replace RS232 serial wires on embedded systems without using IrDA protocol and with self-programmable speed selection in user's own application software. **A direct replacement for ESI9680 of Extended Systems in level mode.**



## Connector Pin Definition

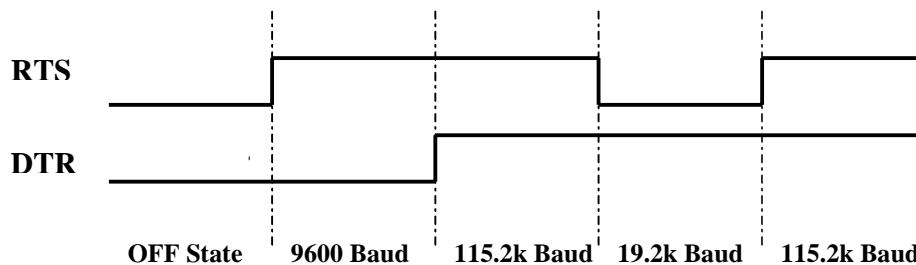
Signal Name	Pin Number	Signal Description
DCD	1	Not Connected
Rx	2	Data transmitted from IR220Li / 220LN to PC
Tx	3	Data transmitted from PC to IR220Li / 220LN
DTR	4	Supplies power and selects baud rate
GND	5	Signal Ground
DSR	6	Connected internally to DTR
RTS	7	Supplies power and selects baud rate
CTS	8	Not Connected
RI	9	Not Connector

## Baudrate Selection Algorithms

### IR220Li - LEVEL MODE

ACT-IR220Li is a baud rate selectable adapter, it supports 3 baud rate by changing DTR and RTS signals from serial port. Set RTS and DTR to the following static state to select the baudrate in the following table:

RTS	DTR	Baud rate
0	0	No supported
1	0	9.6kbps
0	1	19.2kbps
1	1	115.2kbps



### IR220LN – PRE-FIXED ( HARDWARE JUMPER )

ACT-IR220LN is a series product that support 5 fixed baud rates as below. The baud rate can't be changed by user, it is fixed by ACTiSYS during production.

Product No.	Baud rate
ACT-IR220LN-1	9.6kbps
ACT-IR220LN-2	19.2kbps
ACT-IR220LN-3	57.6kbps
ACT-IR220LN-4	115.2kbps
ACT-IR220LN-5	38.4kbps

## Electrical characteristics

PARAMETERS	MIN.	TYPICAL	MAX.	UNITS
DC supply voltage	4.8	5.0	5.5	V
Supply voltage, VSS		0		V
Operating free-air temperature range, TA	0		40	°C
DC current (Ready mode)		2		mA
DC current (Active mode)		100		mA
RS232 signal threshold level	+/-3		±12	V

## Transmission Characteristics

PARAMETERS	TYPICAL	UNITS
IR transmit pulse width	1.63	uS
Optical cone angle	+/-15	Degree
Transmission distance	1 to 200	cm
Receiver Latency	100	uS

## Specifications

<b>Physical Layer</b>	IrDA – 1.0 ( SIR ) compatible
<b>Communication Dist. &amp; Speeds</b>	Communication speeds programmable at
<b>Connection</b>	Standard PC 9 pin DSUB – Female RS-232 Serial COM port to IrDA communication
<b>Power Source</b>	RS-232 port power only. No external power required.
<b>Power Consumption</b>	0.3W ( Peak )
<b>Dimensions / Weight ( Excluding Cable )</b>	Dimension : 2.4”(L) X 1.4”(W) X 0.74(H) 61.8mm X 35.6mm X 18.7mm Weight : 2.85oz ( 77.2gm )
<b>Temperature Range</b>	0°C to 40°C ( 32°F to 104°F )
<b>Cable Length</b>	100cm ±

## Material Composition

Component	Material	Part Number	UL Flame Rating	Colour
Top Case	ABS : GE GPP 4500 / GE GPM 5500	03-502-006	UL94HB	Black / Beige
Bottom Case	ABS : GE GPP 4500 / GE GPM 5500	03-502-007	UL94HB	Black / Beige
Lens	GE Lexan PC ( IR ) 920A / 940A / 141L	03-502-008	UL USA E 121562 UL 94V-2 ( 0.061" ) UL 94V-0 ( 0.12" )	DYE 21051
Cable	Cable Insulation : PVC	03-402-004	UL 2725 USB Cable	Black / Beige
Cable Molding Compound	PVC		UL94HB UL94V-O	Black
PC Board	FR-4	03-A03-001	UL94V-O	Green

## Regulatory Specifications

### Radiated and Conducted EMC

FCC-B

VCCI-2

EN50081-1 EN55022 ( 1988 )

### Susceptibility Compliance

EN50081-1 ( 1992 )	EN55024 ( 1998 )	EN61000-4-5 ( 1995 )
EN55022 ( 1998 )	EN61000-4-2 ( 1995 )	EN61000-4-6 ( 1996 )
EN61000-3-2 ( 1992 )	EN61000-4-3 ( 1995 )	EN61000-4-8 ( 1994 )
EN61000-3-3 ( 1995 )	EN61000-4-4 ( 1995 )	EN61000-4-11 ( 1994 )

## Warranty Information

THE FOLLOWING WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

ACTiSYS Corporation warrants to the first consumer purchaser, for a period of one year from the date of purchase, that this wireless interface ("the Product") will be free from defective workmanship and materials, and agrees that it will, at its option, either repair the defect or replace the defective Product or part thereof at no charge to the purchaser for parts or for labor.

This warranty does not apply to any appearance items of the Product, any consumable items such as paper, ink ribbon, or batteries supplied with the Product, or to any equipment or any hardware, software, firmware, or peripheral other than the Product. This warranty does not apply to any Product the exterior of which has been damaged or defected, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design, construction or interfacing. **Tampering With Label Voids Warranty.**

In order to enforce the rights under this limited warranty, the purchaser should mail, ship, or carry the Product, together with proof of purchase, to ACTiSYS.

The limited warranty described above is in addition to whatever implied warranties may be granted to purchasers by law. To the extent permitted by applicable law, ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USE ARE LIMITED TO A PERIOD OF ONE YEAR FROM THE DATE OF PURCHASE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Neither the sales personnel of the seller nor any other person is authorized to make any warranties other than those described above, or to extend the duration of any warranties beyond the time period described above on behalf of ACTiSYS Corporation.

The warranties described above shall be the sole and exclusive remedy available to the purchaser. Correction of defects, in the manner and for the period of time described above, shall constitute full satisfaction of all claims, whether based on contract, negligence, strict liability or otherwise. In no event shall ACTiSYS Corporation be liable, or in any way responsible, for any damages or defects in the Product which were caused by repairs or attempted repairs performed by anyone other than ACTiSYS technician. Nor shall ACTiSYS Corporation be liable or in any way responsible for any incidental or consequential economic or property damage. Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply for you.

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This warranty does not apply to any appearance items of the Product, any consumable items such as paper, ink ribbon, or batteries supplied with the Product, or to any equipment or any hardware, software, firmware, or peripheral other than the Product. This warranty does not apply to any Product the exterior of which has been damaged or defected, which has been subjected to misuse, abnormal service or handling, or which has been altered or modified in design, construction or interfacing. Tampering With Label Voids Warranty.

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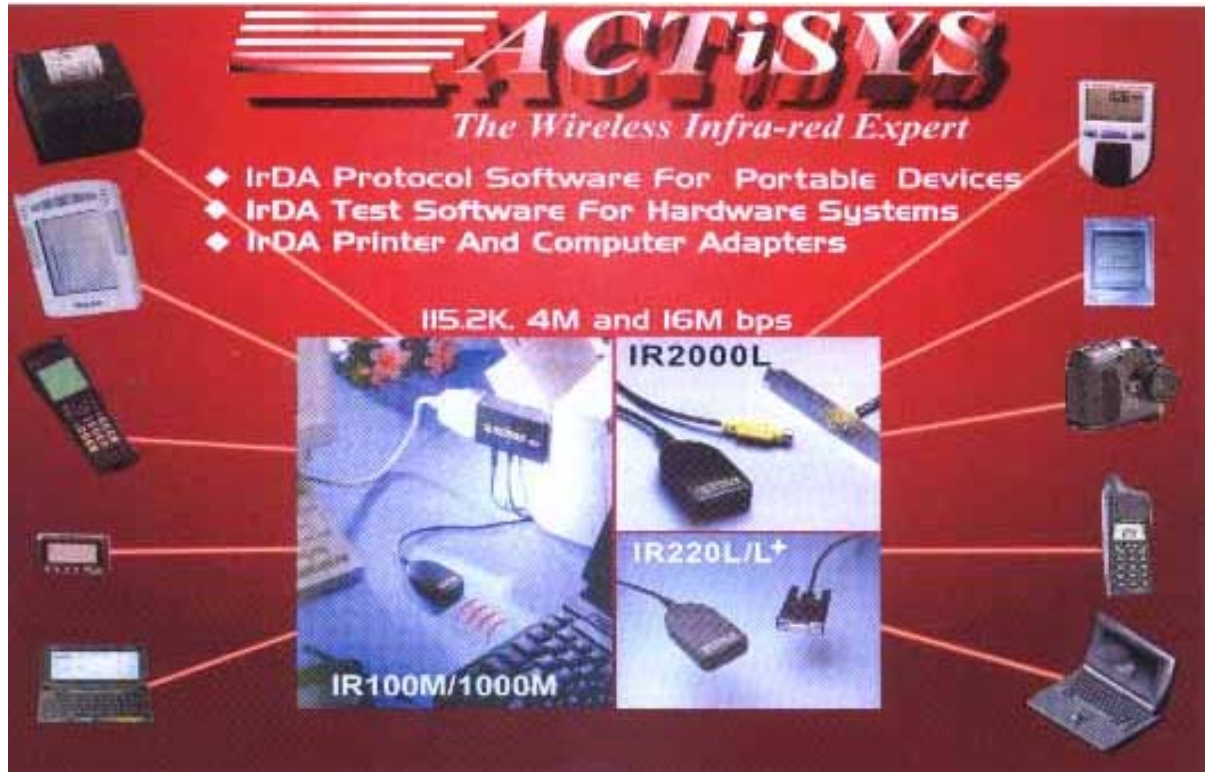
The limited warranty described above is in addition to whatever implied warranties may be granted to purchasers by law. To the extent permitted by applicable law, **ALL IMPLIED WARRANTIES INCLUDING THE WARRANTIES OF MERCHANT ABILITY AND FITNESS FOR USE ARE LIMITED TO A PERIOD OF 1 YEAR FROM THE DATE OF PURCHASE.** Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

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## CONTACT INFORMATION



**ACTiSYS**  
*The Wireless Infra-red Expert*

- ◆ IrDA Protocol Software For Portable Devices
- ◆ IrDA Test Software For Hardware Systems
- ◆ IrDA Printer And Computer Adapters

115.2K, 4M and 16M bps

IR100M/1000M

IR2000L

IR220L/L+

The advertisement features a central collage of images showing various IrDA devices and adapters, including a printer, a handheld device, a mobile phone, a laptop, and a desktop computer. Red lines radiate from the central text and images to the surrounding product photos. Below the main advertisement, there are two horizontal blue lines.